

REMARKS

Upon entry of the present amendment, claims 12-14 will have been amended to clarify the features of the claimed invention. The specification will also have been amended in order to eliminate several instances of a noted informality.

In view of the herein contained amendments and remarks, Applicants respectfully request reconsideration and withdrawal of the outstanding rejection together with an indication of the allowability of all the claims pending in the present application, in due course. Such action is respectfully requested and is now believed to be appropriate.

In the outstanding Official Action, the Examiner indicated acceptance of the drawings submitted on August 20, 2003. In view of the Examiner's indication, the drawings in the present application are no longer subject to objection and fulfill all drawing requirements. The Examiner is respectfully thanked for his approval of the drawings.

The Examiner objected to the specification because of a number of instances of a misspelling. By the present Response, Applicants have amended the disclosure of the present application to eliminate each of these informalities. In view of the amendments to the specification, it is respectfully submitted that the Examiner's objection to the disclosure has been overcome. An indication to such effect is respectfully requested in due course.

In the outstanding Official Action, the Examiner rejected claims 12-14 under 35 U.S.C. § 103 as unpatentable over TAKAI et al. (U.S. Patent No. 5,771,451) in view of

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MANABE (U.S. Patent No. 5,423,067). Applicants respectfully traverse the above rejection and submit that it is inappropriate with respect to the claims defining the features of Applicants invention as now pending herein. Accordingly, reconsideration and withdrawal of the outstanding rejection is respectfully requested.

In setting forth the rejection, the Examiner asserted (with respect to claim 12) that TAKAI et al. discloses a radio communication system including a first base station, a second base station and a mobile station that combines a signal from the first and second base stations while a handover from the first to the second base station is in progress. The Examiner further asserted that both the first and the second base stations control power levels of the signals transmitted to the mobile station in accordance with the distance from the first and a second base station to the mobile station such that the first base station gradually reduces power levels of signals transmitted to the mobile station as the mobile station moves further from the first base station and the second base station gradually increases the power level of signals transmitted to the mobile station as the mobile station moves closer to the second base station to keep a combined signal, obtained in the mobile station, at a desired quality level. The Examiner, however, admitted that TAKAI et al. does not disclose finding the distance based on a timing difference. The Examiner asserts that MANABE discloses controlling power of transmission based on a distance determined by differences in timing measurements. Accordingly, the Examiner concludes that it would have been obvious to one

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of ordinary skill in the art to use timing difference to determine distance in a power control system in order to reduce unnecessary power and eliminate interference.

As noted above, Applicants traverse the above rejection and submit that it is inappropriate. By the present Response, Applicants have amended each of claims 12-14 to more clearly recite a significant feature of Applicants invention. According to this feature, as recited, for example, in claim 12, a time difference is measured between a "transmission timing of a downlink signal and reception timing of an uplink signal". Based on the measured time difference, a distance from the first base station and the second base station to the mobile station is determined. It is respectfully submitted that the combination of features, including the measurement and determination as noted above and as recited in the respective terms of claims 12, 13 and 14, is not taught, disclosed nor rendered obvious even by the combination of TAKAI et al. and MANABE.

As a result of the measurement of the time difference between transmission timing of a downlink signal and reception timing of an uplink signal and determining a distance from the first base station and the second base station to the mobile station power levels of signals transmitted to the mobile station are controlled. As a result of this feature of the present invention, in the respective recited combinations, a significant advantage is provided. In particular, the present invention enables accurate determination of the distance between the

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base stations and the mobile station and as a result, the power level can be controlled accurately, thus making possible highly accurate downlink transmission power control.

In direct contrast with the features of the present invention, MANABE discloses calculating a distance between a mobile station and a base station based upon a time delay measured in the mobile station. In this regard, column 5, lines 14-20 of MANABE explicitly recite that the measurement of the relative time delays takes place at mobile station 1 and the results of the measurement are reported to the control base station 2A (column 5, lines 14-16).

In direct contrast, Applicants claim 12, for example, explicitly recites that both the first and the second base stations "measure a time difference between transmission timing of a downlink signal and reception timing of an uplink signal". This features is clearly not disclosed by MANABE.

At column 4, line 50, MANABE discloses that the relative time delay measurement section 1B of mobile station 1 measures each relative time delay of the reception timing of the prescribed broadcast control channels of neighboring base stations with respect to the reception timing of the broadcast control channel of control base station 12A (step 12).

Again, it is also clear from this portion of MANABE that the time delay measurements are performed at the mobile station. In contrast and as noted above, according to the present invention, it is the base stations that measure the time difference between the

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transmission timing of a downlink signal and the reception timing of an uplink signal. Thus, there is a clear explicitly recited difference between the recitations of Applicants claims and the disclosure of MANABE regarding the feature. For this reason alone, it is submitted that the claims in the present application are patentable over the combination of TAKAI et al. and MANABE.

In addition, the present invention is structured so as to measure the time difference between the transmission time of a downlink signal and the reception timing of an uplink signal. Based on this measured difference in the transmission timing, a distance between the base stations and the mobile station is determined.

In direct contrast, MANABE teaches measuring a delay in the reception timing of a prescribed broadcast control channel of neighboring base stations with respect to the reception timing of the broadcast control channel of the control base station. Thus, MANABE measures reception timings and uses the difference in the reception timings.

On the other hand, the present invention is configured to measure the difference between transmission timing and reception timing at a base station. MANABE merely teaches measuring the difference between a plurality of reception timings at the mobile station. Thus, the time difference measurement of MANABE and the time distance measurement of the present invention are measured relative to two different factors. Accordingly, the differences between the present invention and MANABE are so significant

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and drastic that one could meet the recitations of the claims and thus would not achieve the advantages of the present invention.

In addition to the above distinctions, Applicants respectfully submit that MANABE is directed to a system and a method for providing intensity/coverage reference maps. In particular, MANABE relates to determining mobile station location based on the distances between mobile station and base stations. While MANABE performs a handoff, it does not appear to recite any particular details of the handoff.

On the other hand, TAKAI et al., the primary reference relied upon by the Examiner, discloses transmission power control. Accordingly, one of ordinary skill in the art would not combine the mobile station location and reference maps of MANABE with the transmission power control system of TAKAI et al. MANABE does not use the location determination that it arrives at based on the distances between the mobile station and the base station to control handoff and not for controlling the transmission power, as recited in the claims of the present application.

Accordingly, there is no motivation to combine the references relied upon in the rejection in the manner suggested by the Examiner.

Because of each of the above-noted reasons and certainly for all of the above-noted reasons, it is respectfully submitted that the Examiner's rejection is inappropriate and the

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disclosure of the references relied upon are insufficient to render unpatentable any of the claims pending in the present application.

Accordingly, reconsideration and withdrawal of the outstanding rejection together with an indication of the allowability of all the claims pending in the present application are respectfully requested and are now believed to be appropriate and proper.

Applicants note that the status of the present application is after Final Rejection and an applicant is not permitted to amend an application once a Final Rejection has issued. Nevertheless, in accordance with the provisions of 37 C.F.R. § 1.116, Applicants respectfully submit that entry of the present amendment is final. The present amendment does not raise new issues requiring further consideration of search. Rather, the present amendment merely clarifies the recitations of Applicants claims so as to emphasize and focus on features of Applicants invention which are distinct from the disclosure of the references relied upon. The significant features were already recited in the claims. Thus, the amendments to the claims presented herein clearly place the present application in condition for allowance.

Accordingly, entry of the present amendment, reconsideration of the outstanding rejection and an indication of the allowability of all the claims pending in the present application is respectfully requested.

SUMMARY AND CONCLUSION

Applicants have made a sincere effort to place the present application in condition for allowance and believe that they have now done so. Applicants have amended the specification to eliminate a noted formality. Applicants have further amended the claims in order to even more clearly define a distinguishing feature of Applicants invention in the claimed combinations.

Applicants have further discussed the features of Applicants invention and the advantages thereof. Applicants have discussed the disclosure of the references relied upon by the Examiner and have pointed out the significant and substantial deficiencies thereof with respect to the features of Applicants invention. Applicants have discussed the explicit recitations of the pending claims and have pointed out the shortcomings of the references with respect thereto. Applicants have further noted the lack of a motivation for the combination proposed by the Examiner. Accordingly, Applicants have provided a clear evidentiary basis supporting the patentability of all the claims in the present application and respectfully request an indication to such effect in due course.

Applicants have also noted the status of the present application as being after Final Rejection and with respect to such status have provided a basis for the propriety of the entry of the present amendment in accordance with the provisions of 37 C.F.R. § 1.116.

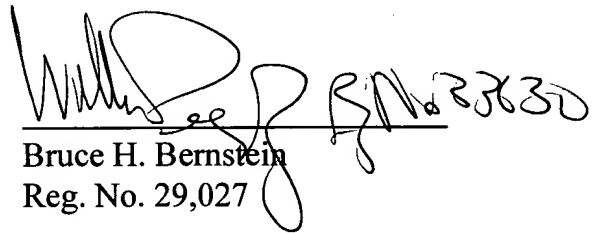


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Any amendments to the claims which have been made in this amendment, and which have not been specifically noted to overcome a rejection based upon the prior art, should be considered to have been made for a purpose unrelated to patentability, and no estoppel should be deemed to attach thereto.

Should the Examiner have any questions or comments regarding this Response, or the present application, the Examiner is invited to contact the undersigned at the below-listed telephone number.

Respectfully submitted,  
M. UESUGI et al.



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